



**Your Partner in
the Starch Industry**

A HAVER & BOECKER Brand

Your product - Our focus: the optimal packaging of your starch products



You produce

- maize starch
- potato starch
- dextrose, maltodextrin and gluten
- proteins
- etc.

We have specialised in filling of your products.

We develop solutions that meet the quality requirements of the food industry in the same way as the trends in the international packaging industry. We deliver:

- Bagging systems for valve bags, open-mouth bags, FFS bags and big bags
- Palletisers
- Silos, conveyors, bulk loading technology
- Digital products for process visualisation, warehouse logistics and recording of the plant effectiveness

Our solutions provide you with significant advantages:

- Profit maximisation through optimal product processing with a high weight accuracy, with improved product and moisture protection
- Cost reduction due to a clean working environment and minimised cleaning effort
- Image plus through optimally filled attractive bags that are easy for your customers to handle
- Reduction of delivery costs due to low packing volumes

We are happy to advise you.

In our INSTITUTE we analyse your products and determine the optimal machine and bag design.



PROcheck - The complete view of your packaging process



Maximise your profits with PROcheck.

Using our new PROcheck approach, we examine the potential of our customers' processes. The aim is to optimise machines, systems and plants in such a way that they can operate even more successfully and profitably.

PROcheck

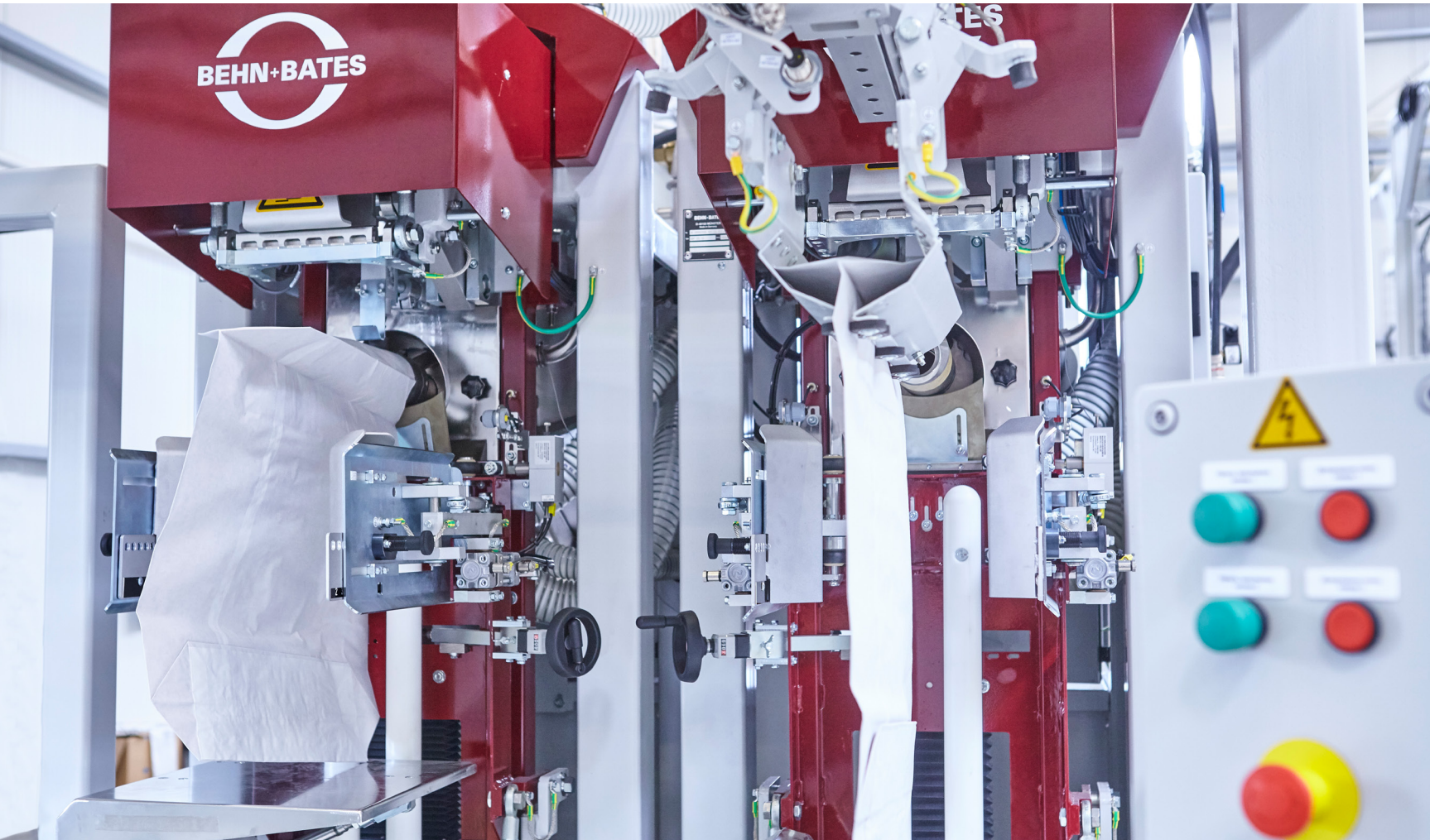
Diagnostics	Take advantage of our services, software and analytical equipment, in order to achieve the best possible economic result with your process.
Systems & plants	Under the umbrella of our parent company, Haver & Boecker, we have gathered the best brands to give you an installation or system without compromise.
Process engineering	Shape your concepts and ideas with our customised, experience-based engineering services.
Equipment	Use the correct machine technology, adapted to the specifications of your products, to meet your expectations.
Consumables	We advise you on your consumables at every stage of your project; we develop proposals and even provide the consumables.
Original parts	Do not compromise, buy BEHN + BATES original parts. Our original parts are your guarantee that your system will run optimally.
Rebuild and upgrades	Pick up on new developments and technologies by converting and modernising your plant - and bring it up to the standard you need today.
Service	Combine your experience with ours to ensure professional commissioning for your plant start-up and guarantee consistent packaging quality through regular support.

We are there for you.

With our life-cycle approach PROcheck, we extend the service life of your systems so that you can also continue to be in PERFECT FLOW in the future.



The all-rounder for starch, starch derivatives and proteins - Our pneumatic packer



Easy to clean filling chamber



Filling spout with an inflatable sleeve



Manually operated gross pneumatic packers

The pneumatic packer ensures equal product discharge from the filling chamber through the conveying air quantity, which can be adjusted depending on the product. During the filling process, the special BEHN + BATES filling nozzle extracts the air from the bag.

Your advantages:

- High filling capacities with a low internal bag pressure and minimal dust generation due to the special BEHN + BATES filling nozzle with product return to the pre-hopper
- Careful handling of difficult-to-fluidise products through our fully aerated chamber bottom
- A low cleaning effort requirement due to minimal residual product quantities
- Reduced energy requirements due to minimal air flow rates

The technical finesses of our pneumatic packer:

- A filling spout with an inflatable sleeve for valve sealing
- A fine flow dosing, adjustable depending on the product
- Separately adjustable conveying air volumes depending on the product
- A quickly replaceable aeration plate
- An integrated product collecting tray for easy cleaning

Options:

- Automatic conveying air regulation
- Automatic residue emptying
- Automatic dosing regulation
- A valve bag closing station with ultrasonic technology
- A low-wear design for abrasive products
- A metal detector, integrated in the filling channel, with a test device for different types of metal



Machine capacity

up to 250 bags/h
per spout at 25 kg



Filling weights

from 5 kg to 50 kg



Specially suitable for

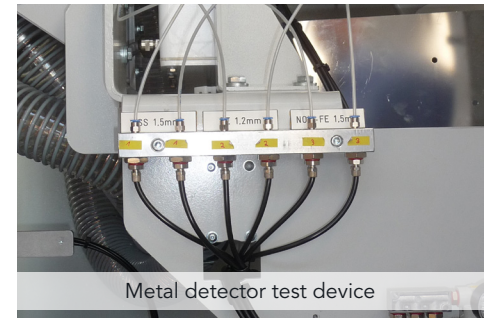
potato starch
modified maize starch
dextrose
maltodextrin
gluten



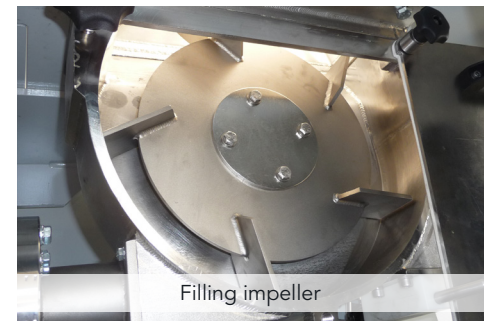
Fastest filling technology for powders - Our impeller packer



Residual product discharge flap



Metal detector test device



Filling impeller

Our impeller packer stands for fast and low-dust filling, even of finely powdered and easily flowing products. Your product is decisive for the choice of a vertical or horizontal impeller wheel as well as the design of the impeller wheel diameter.

Your advantages:

- A high packaging performance due to bag filling without overpressure and minimal deaeration times
- Precise weight filling due to coarse and fine dosing
- Optimum pallet utilisation due to particularly low-air and compactly filled bags
- Reliable filling even of air-tight bags for improved product protection
- Reduced maintenance due to the use of low-wear components
- Compact bag filling thanks to the sophisticated impeller packer concept
- Dust-tight sealing of the bag to be filled by means of the BEHN + BATES filling nozzle with an inflatable sleeve

Options:

- A metal detector, integrated in the filling channel, with a test device for different types of metal
- A valve bag closing station with ultrasonic technology



Machine capacity

up to 300 bags/h
per spout at 25 kg



Filling weights

from 5 kg to 50 kg



Specially suitable for

native starch
gluten

Your product under seal - Our ultrasonic sealing station



Your products only meet the quality required on the market if they arrive at your customers perfectly protected from external influences. To ensure that this is the case, we equip virtually every filling machine that leaves our production facilities with our ultrasonic sealing station. It closes all valves with a PE coating directly at the filling spout, cleanly and tightly.

Your advantages:

- Optimum product protection
- Maximum cleanliness of the entire filling line
- Space and cost saving integration in the filling machine frame
- Dust explosion protection with ATEX certification

Options:

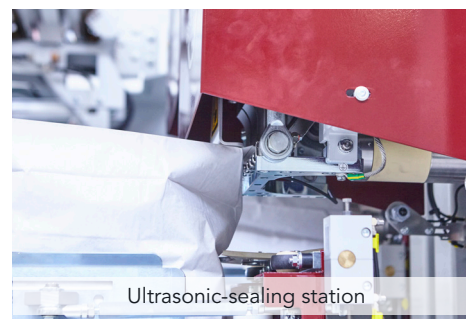
- Pressure changeover for welding of paper and PE bags
- A double weld seam
- An ATEX version for Zone 21



Sealing directly at the filling spout



Sealed valve bag



Ultrasonic-sealing station

A sign of quality.

It is only in a tightly sealed bag that your product will arrive hygienically to your end consumers - an absolute quality feature for which you stand with your name.

Straight ahead - Our bag applicator



For automation of your bagging system, we offer you our FRONTLINE and COMPACT valve bag applicators.

Your advantages:

- Safe application of the bags through linear movements
- Optimum pre-opening of the valves through use of opening mandrels
- Flexible space planning due to free choice of a bag magazine
- Reduced maintenance effort required due to good accessibility
- Easy conversion to different bag sizes

Options:

- Integration of a labeller for marking the empty bags
- Design of the empty bag magazine with an empty bag bundle carriage, vertical magazine or horizontal magazine
- Extendable versions for later retrofitting of filling spouts to increase capacity
- Motorised drives



The special feature.

All of our bag applicators place the bag linearly on the filling spout.

Plug 'n Pack - INTEGRA FD



Reduced machine noise, a clean working environment: thanks to our Plug 'n Pack concept, the entire process of bag application, filling and sealing takes place in a dust-tight enclosed cabinet.

Your advantages:

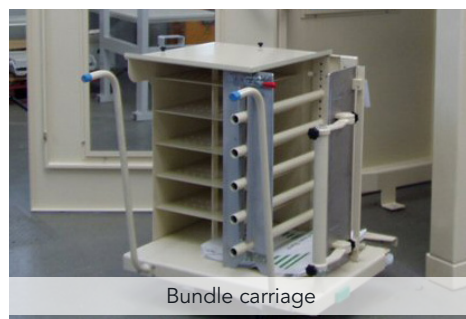
- High cleanliness of the working environment
- Reduced commissioning costs due to complete pre-assembly
- Space saving due to integrated pneumatic and electric cabinets
- A high operating comfort due to the touch panel and large polycarbonate windows for visual control

Options:

- Over-pressurisation with filtered air to create a hygiene zone
- Extendable versions for later retrofitting of filling spouts to increase capacity
- Different bag magazines depending on the desired capacity and space conditions



Horizontal empty bag magazine



Bundle carriage



Vertical magazine

Air or impeller - the right filling technology for your product.

The number of filling spouts is also adjusted to the required output.

From 1 - 4 spouts, everything is possible, even retrofitting at a later date.

The high performer - Our ROTO-PACKER



Product infeed into the rotating silo



Automatic placing of the empty bags



Residual product collection hopper

Highest bagging capacities of up to 2,400 bags/h can be achieved with our ROTO-PACKER for valve bags. The filling spouts are mounted on a rotating frame on the ROTO-PACKER. This results in a reduced space requirement. The bags can be placed on the filling spouts both manually and by our RADIMAT bag applicator. Before discharge, bag sealing is possible directly at the filling spout, using our ultrasonic sealing device.

Our ROTO-PACKER works with the correct filling system for your product: air or impeller. You decide how many filling spouts your ROTO-PACKER will have: what counts here is performance or also your desire for expandability at a later date.

Your advantages:

- Cost efficiency due to a central product supply and a central full-bag transport system
- Improved economic efficiency due to a higher performance in a small space
- Clean product handling thanks to a product-specific filling system and ultrasonic sealing directly at the filling spout
- Reduced maintenance efforts due to continuous gentle operation of downstream units
- Simple automation with the RADIMAT valve bag applicator
- Successive increase in production through expandable machine design - without changes to the periphery
- Higher maintenance efficiency due to filling spouts that can be switched off individually

Options:

- A horizontal magazine in an extended version for up to 700 bags
- An alternative version with a roller magazine
- Automatic residue emptying
- A second product inlet



Machine capacity

2,400 bags/h
at 25 kg



Filling weights

from 5 kg to 50 kg

Trendsetting - Our ADAMS EDITION



Top marks for product protection, logistics and product presentation - the FFS sack formed from an endless gusseted tubular film meets these requirements. Our ADAMS technology for powder enables you to:

- An optimum bag preparation by cutting off the film length required for the bag weight for your starch product and the subsequent bottom seam and corner welding
- A clean filling thanks to the dust-tight BEHN + BATES powder filling spout, which fills your starch product according to the gross system via air or impeller units
- A clean and efficient overall result due to internal and bottom vibrators for optimum product compaction in the bag

Your advantages:

- Excellent product protection against moisture and external influences in a tightly sealed PE bag
- Compact bag shapes due to simultaneous bag filling and compaction as well as integrated corner welding
- Environmental friendliness due to the dimensionally accurate packaging and the resulting reduction of packaging material
- A highest tear strength of modern - even thinnest - films to avoid bag breakage in the entire logistics chain
- A perfect appearance through use of sophisticated bag printing with possible gloss effects - for high customer acceptance

Options:

- Personalised RFID registration with chip or stick
- Bag labelling using a printer or labeller
- A vacuum lance or vibrating bottle for product compaction
- Automatic conveying air and dosing control

The right filling technology for your product.

With the ADAMS EDITION, your product is compressed to the maximum in the bag and residual air is minimised so that dense PE films can also be used.



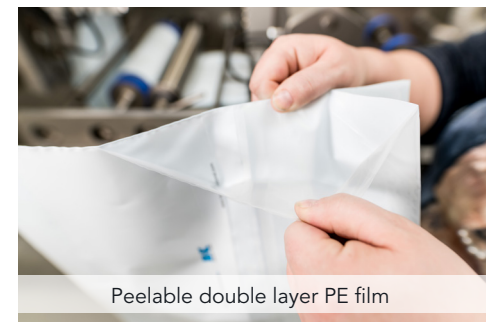
WE TAKE CARE - Our ADAMS CARE-LINE EDITION



Rotating filling spout



Round belt conveyor in hygienic design



Peelable double layer PE film

Under the motto „WE TAKE CARE“, our BEHN+BATES experts have introduced the ADAMS CARE-LINE EDITION to the market - a packaging solution that meets EHEDG guidelines by combining proven components and innovative hygiene aspects. The special feature is that the most hygienic packaging material for highly sensitive food - tight PE film bags - is used for processing.

Your advantages:

- Maximum product protection through use of tight PE film bags, edge-sealed bag sealing and minimal component use above the filling spout
- Maximum cleanliness due to the use of completely encapsulated components, as well as rounded corners and bevelled edges
- Maximum weight accuracy through use of separate coarse and fine flow dosing
- Reduced maintenance efforts due to continuous gentle operation of downstream aggregates
- A compact bag shape due to corner welding for stable side gussets and head air extraction before closing the filled bag
- Easy operation thanks to the clearly laid out touch panel and the open and accessible machine design for quick cleaning and maintenance
- Environmental compatibility due to reduced packaging material requirements and the use of pure and recyclable polyethylene films

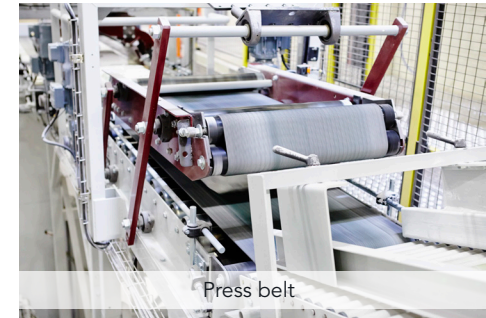


Machine capacity

300 bags/h at
breathable films

200 bags/h at
dense films

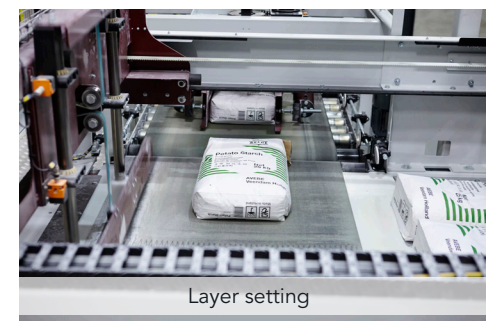
Down to earth and up high - Our TERRAM and ARCUS palletising systems



Press belt



Turning cross



Layer setting

Particularly gentle bag handling - that is what our palletisers, produced by our sister company NEWTEC BAG PALLETIZING, stand for.

The G300 and G600 palletiser

The filled bags are placed directly on the pallet individually by the gripper robot according to the specified measurement.

The TERRAM palletiser

The palletiser with the bag feed at floor level, capable of up to 1,000 bags per hour. A turning clamp or a cross aligns the bags. The palletiser is low-maintenance and easily accessible for maintenance at all levels.

The ARCUS palletiser

Bag palletising systems from 600 to 2,600 bags/h. These automatic palletisers are suitable for a very wide range of products and bag types. A turning clamp or a cross aligns the bags. The layers are built up row by row, taking into account the shape of the bag. Each layer is balanced and pressed to optimise the pallet geometry. The modular design can be expanded as throughputs and pallet patterns change.

Your advantages:

- Project-oriented machine design due to the standardised modular machine construction
- Gentle bag handling due to the full bag gripper, turning clamp or cross and precise positioning on the pallet or stripper plate
- Optimum straight and attractive bag stacks through use of conforming and centering plates as required
- Reliable handling of different bag formats - and also of difficult-to-handle bags with a low fill level or easily flowing products
- Ease of use due to automatic pallet calculation and position determination depending on the bag/pallet format and palletising scheme

We deliver.

Complete storage, packaging and loading systems for bulk materials and liquids in a premium quality from a single source. You have one contact person and benefit from the expertise of an entire system chain.



Weighty - Our ELEMENTRA EGF filling station for big bags



Get your products on their way cost-effectively and in a way that conserves resources. We supply the big bag filling station ELEMENTRA EGF in a hygienic design, with and without automatic pallet transport.

Your advantages:

- Operator friendliness due to swivelling rear suspension hooks for good accessibility by operating personnel.
All four hooks open automatically after filling
- Cleanliness due to an inflatable sleeve with a counter pressure ring, which seals the big bag during filling
- Shape-stable bags due to product-appropriate metering and compaction, for which we use a vibrating table

Options:

- Magnetic grids and metal detectors with a testing device
- An automatic empty pallet feeder with a cover sheet applicator
- Automatic full pallet transport
- Palletless big bag transport



Machine capacity

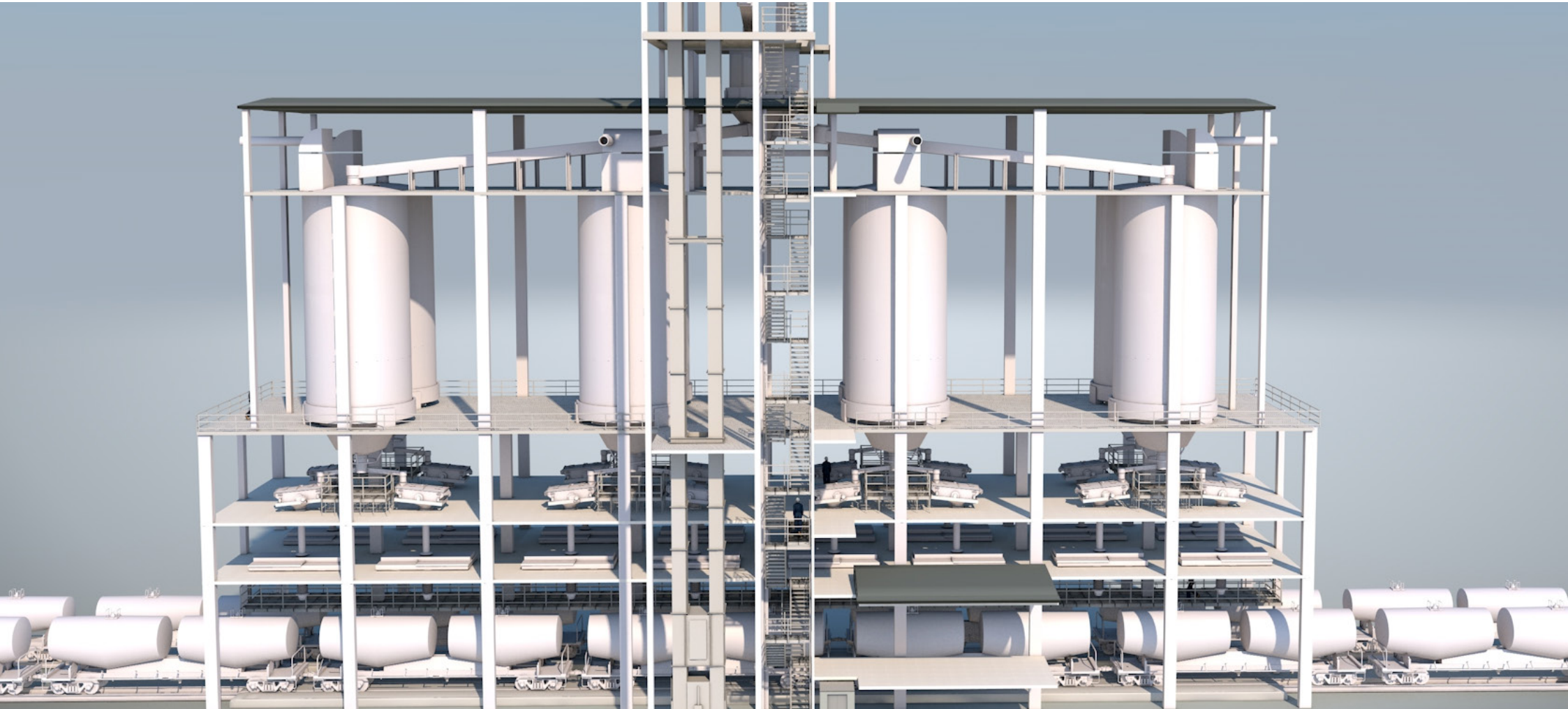
15-20 bags/h
at 1,000 kg



Filling weights

from 250 kg to 1,400 kg

And what else counts - Our plant planning and engineering



Your packaging success is the result of comprehensive planning, carefully selected filling technology and an overall concept optimally matched to your project, which also includes the upstream and downstream system components, for example:

- Silo technology
- Filter systems
- Conveyor systems
- Ship loaders and unloaders
- Bulk loading technology

We develop comprehensive solutions for hygienic, reliable and economical processes in food processing in close cooperation with our sister company IBAU HAMBURG. Through careful plant planning and great ingenuity, our sister company always manages to design and implement convincing turnkey solutions - for a wide variety of applications on land and on water.

IBAU HAMBURG as a plant planner has only one goal: to always deliver the right, customised and high-quality process solution for your specific application. We continuously innovate and improve all processes and products. Every new idea is integrated. We make them immediately feasible for your business - and always in close cooperation with you.

Original solutions - tailor-made while taking into account modern food standards.

Holistic concept planning.

We plan your complete packaging line - from product pre-storage to the ready-for-sale transport-secured full bag pallet.





A HAVER & BOECKER Brand

PROCESSING STORAGE MIXING FILLING PACKING PALLETIZING LOADING DIGITALIZATION



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